NOVO Electric Technology

Technical Specification for Neutral Point Grounding Reac-tor

This technical specification is applicable to the design, manuf-acture, test and other technical services of neutral point grounding reactor. It puts forward the technical requirements of functional design, structure, performance and test of this equipment.

1. Conditions of Use

Reactor 17.2 Ω

Where to install: Outdoors

Environment temperature: maximum temperature: +55℃;

minimum temperature: -25℃; maximum daily temperature difference: 25K

Elevation: ≤ 1000m (if more than 1000m,

it needs to be corrected according to the standard)

Relative humidity: daily average ≤ 95%; monthly average ≤ 90%

Seismic capacity: earthquake intensity 8 degree (horizontal acceleration 0.25g,

vertical acceleration 0.125g)

Pollution level: IV (heavy pollution area)

Installation: directly connected to the neutral point of the main transformer, and installed on the foundation through brackets and bases.

2. Technical Requirement

2.1. Insulation Levels

Rated lightning impulse withstand voltage (peak, LI): consistent with the insulation level of the neutral point of the main transformer Rated short-time power frequency withstand voltage (1min, AC):

consistent with the insulation level of the main transformer neutral point

2.2 Temperature Rise

Temperature rise limit at rated current: F class ≤ 150K

Core, metal parts and insulation:

not exceeding the temperature that causes damage to the surrounding insulation material.

2.3 Structure and Design

Type: [Dry]

Winding conductor: aluminum wire wrapped with high strength insulation material.

Pillar insulators: high strength porcelain insulators or composite insulators are selected ,and the climbing distance meets the requirements of class IV pollution level C≥31mm/kV) orrosion re(sistance: all metal parts (supporters, connectors, fasteners, etc.) are treated with hot galvanizing or other effective corrosion resistance treatment.

Noise reduction requirements:

At rated current the noise level at a distance of 1 meter from the outer wall of the reactor shall not be greater tha 65 dB。

Overvoltage protection: the terminals of the metal oxide arrester (MOA) are reserved at both ends of the reactor for installation.

3. Trial

All tests are completed by the manufacturer before leaving the factory, and an official test report is issued.

3.1 Type Test

heat rum test

Lightning withstand voltage test

Short time power frequency withstand test

3.2 Routine Test

Resistance measurement of windings

Measuring the resistance value (at rated current)

Loss measurement (at rated current)

external applied AC withstand test (1 min)

inter-turn insulation test (ind-uced voltage test)

4. Scope of Supply

Neutral point grounding reactor body: 1 set

Installation bracket and complete set of fasteners, anchor bolts: 1 set

Factory test report: 1 copy

spare parts: as needed

5. Technical Document

The supplier shall provide not only but also the following technical documents:
external dimension diagram and installation foundation diagram
Electrical schematic diagram and wiring diagram
Factory test report (including all routine and type test data), product certificate, operation and maintenance ma-nual

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